

# Comparisons of Job Characteristics

**Focus Occupation: Civil Engineers (17-2051)**

**Associated Occupation: Construction Managers (11-9021)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 78

**Focus Occupation: Civil Engineers (17-2051)**

**Associated Occupation: Construction Managers (11-9021)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Building and Construction	4.0	22.2	21.6	0	Current knowledge level may be sufficient
Administration and Management	8.4	16.5	13.0	<<	Extensive education and/or training may be required
Customer and Personal Service	11.3	15.4	13.3	<	Expanded education and/or training may be required
Engineering and Technology	5.7	15.3	24.5	>>	Current knowledge level is likely more than sufficient
Design	5.2	14.4	23.4	>>	Current knowledge level is likely more than sufficient
Mathematics	9.2	12.6	20.0	>>	Current knowledge level is likely more than sufficient
Public Safety and Security	6.9	12.2	12.6	0	Current knowledge level may be sufficient
Mechanical	6.8	11.9	7.9	<<	Extensive education and/or training may be required
Personnel and Human Resources	5.6	11.0	9.4	<	Expanded education and/or training may be required
Law and Government	5.9	10.1	11.3	>	Current knowledge level is likely sufficient
Economics and Accounting	4.4	9.1	7.6	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 71

**Focus Occupation: Civil Engineers (17-2051)**

**Associated Occupation: Construction Managers (11-9021)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
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Management of Personnel Resources	6.9	13.0	11.2	<	A higher skill level may be required
Time Management	8.9	12.9	11.6	<	A higher skill level may be required
Coordination	9.1	12.8	10.8	<	A higher skill level may be required
Monitoring	9.9	12.8	12.5	0	Current skill level may be sufficient
Negotiation	6.8	12.3	7.5	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	12.2	8.9	<<	Extensive development of skills in this area may be required
Persuasion	7.4	11.7	8.3	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	11.1	14.6	>>	Skill level is likely more than sufficient
Management of Material Resources	3.7	10.4	9.1	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 97			
Focus Occupation: Civil Engineers (17-2051) Associated Occupation: Construction Managers (11-9021)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	14.2	15.4	0	Current ability level may be sufficient
Far Vision	7.8	12.0	11.9	0	Current ability level may be sufficient
Information Ordering	9.9	11.8	13.8	>	Current ability level is likely sufficient
Visualization	7.5	11.5	14.1	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	11.0	14.9	>>	Current ability level is likely more than sufficient
Number Facility	6.3	11.0	13.9	>	Current ability level is likely sufficient
Flexibility of Closure	7.8	10.3	13.3	>>	Current ability level is likely more than sufficient
Time Sharing	6.6	8.3	7.5	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 83
Focus Occupation: Civil Engineers (17-2051) Associated Occupation: Construction Managers (11-9021)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Assign work to staff or employees	30	

Compute production, construction, or installation specifications	58
Direct and coordinate activities of workers or staff	3
Direct and coordinate construction of mine shafts or tunnels	89
Estimate materials or labor requirements	61
Inspect facilities or equipment for regulatory compliance	51
Inspect project operations, or site to determine specification compliance	72
Interpret maps for architecture, construction, or engineering project	77
Perform safety inspections in construction or resource extraction setting	46
Recognize construction industry codes or symbols on blueprints	87
Understand construction specifications	53
Understand government construction contracting regulations	87
Use building or land use regulations	65
Use computers to enter, access or retrieve data	3
Use knowledge of investigation techniques	16
Use project management techniques	47

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 85

**Focus Occupation: Civil Engineers (17-2051)**  
**Associated Occupation: Construction Managers (11-9021)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Data management and query software	1
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Measuring and layout tools	3
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.